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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,829	04/17/2001	Ken-Ichi Toya	SKT-102-A	9976

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EXAMINER

TRINH, TAN H

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/836,829

Applicant(s)

TOYA, KEN-ICHI

Examiner

TAN TRINH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 and 5 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 4-5 are allowed.

Reasons for allowance

2. The following is an examiner's statement of reasons for allowance:

Regarding independent claims 4-5, the claims have been written in independent forms including all of the limitations of the base claims and intervening claims, therefore, claims 4 and 5 are allowable with the same reasons set forth in the previous Office action (paper # 3).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-3, 6-7 and 12-13 are rejected under 35 U.S.C. 102(a) as being anticipated by Karabins (U.S. Patent No. 5,937,332).

Regarding claim 1, Karabins teaches the land mobile-satellite communication system (see fig. 2) comprising: at least one communication satellite station (see fig. 2, satellite 110); a plurality of portable communication terminals for communicating with each other through a communication link to be formed to include at least one communication satellite station (see fig.2, plurality of portable communication terminals 120) ; and a plurality of mobile repeater stations mounted on mobiles located on the earth for repeating a communication in the

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communication link formed between the portable communication terminals and including at least one communication satellite station (see fig. 2 and fig. 5B, and col. 5, lines 22-34).

Regarding claim 2, Karabins teaches the plurality of the communication satellite stations respectively mounted on a plurality of low earth communication satellites and each the station including a means for communicating with other the stations through inter-satellite links (see fig. 2, col. 4, line 61-col. 5, line 34).

Regarding claims 3 and 13, Karabins teaches wherein the mobile repeater stations include a means for communicating with the communication satellite stations by using a carrier wave of higher frequency than a frequency of a carrier wave to be used for communicating with the portable communication terminals (see fig. 2, col. 4, line 61-col. 5, line 34, since the link to satellite communication stations is higher frequency then the link to portable communication terminals).

Regarding claim 6, Karabins teaches wherein the portable communication terminals include a means for communicating with the mobile repeater stations as well as with conventional land mobile communication systems (see fig. 2, portable communication terminals 120, col. 5, lines 10-18).

Regarding claim 7, Karabins teaches wherein the mobile repeater stations include a means for converting at least one of frequency and modulation for communication (see col. 6,

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lines 11-44), by changing software to allow communication with conventional land mobile communication systems (see col. 6, lines 39-44); Since Karabins teaches the mobile repeater stations detects or monitor the up/down links signal and performs some function as a result of characteristic of the signal, so that is inherency teaching on the by changing software to allow communication with conventional land mobile communication systems.

Regarding claim 12, Karabins teaches wherein the mobile repeater stations include a means for responding to a request from the communication satellite stations and / or portable communication terminals and for functioning as providers (see col. 3, lines 10-51).

Regarding claim 14, Karabins teaches wherein the mobiles are vehicle (see fig. 5B).

Regarding claim 15, Karabins teaches wherein power supplies of the vehicle provide power to the mobile repeater station (see col. 8, lines 29-36).

Regarding claim 16, Karabins teaches wherein the mobile repeater stations include high frequency plane antenna (see col. 7, lines 1-55).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karabins (U.S. Patent No. 5,937,332) in view of Macridis (U.S. Pub. No. 20030032429).

Regarding claim 10, Karabins fails to teach the communication satellite stations include a means for functioning as a Peering points or Proxies to provide accessibility to conventional land mobile telephone systems or Internet.

However, Macridis teaches the communication satellite stations include a means for functioning as a Peering points or Proxies to provide accessibility to conventional land mobile telephone systems or Internet (see fig. 1 and abstract lines 1-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Karabins system and the teaching of Macridis on the Internet thereto in order to provide user to use the Internet on anywhere is easier.

Regarding claim 11, Karabins teaches the data signal link from mobile repeater 220 forward to earth station 130, relayed by satellite station 110, the data received and retransmit (see fig. 2), that is obvious to the storing data received from the portable communication terminals and for functioning as servers.

Regarding claims 8 and 9, the communication satellite stations include a means for transmitting information about their own position; and the mobile repeater stations include

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means for aiming an antenna beam thereof at the communication satellites according to received information about the position of the communication satellites and a detected position of the mobile repeater stations. This is a well known in the art, the mobile repeater stations or any satellite communication systems to communication with the satellite stations must aiming an antenna beam at the satellites station.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karabins (U.S. Patent No. 5,937,332) in view of Lorbeck (U.S. Pub. No. 20030114135).

Regarding claim 17, Karabins teaches wherein communication between the portable communication terminal and the mobile repeater stations. But Karabins fails to show the portable communication terminal and the mobile repeater stations use S or near S frequency band ranging from 1-10 Ghz and communication between the low earth communication satellite station and the mobile repeater station use frequency Ku band.

However, Lorbeck shows the portable communication terminal and the mobile repeater stations use S or near S frequency band ranging from 1-10 Ghz (see fig. 2, sessions [0006] and [0034]) and communication between the low earth communication satellite station and the mobile repeater station use frequency Ku band (see figs, 1 and 2, session [0038], lines 7-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Karabins system and by the providing of the teaching of Lorbeck with the S and Ku band thereto in order to provide user with the repeater operated on the multiple band.

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Response to Arguments

8. Applicant's arguments with respect to claim 1-3, 6-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Himmelstein (U.S. Patent No. 6,647,270) discloses vehicle talk.

Lovinggood (U.S. Patent No. 6,697,603) discloses digital repeater.

Rosener (U.S. Pub. No. 20020028655) discloses repeater system.

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (703) 305-5622. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

Tan H. Trinh
Art Unit 2684
March 24, 2004



NICK CORSARO
PATENT EXAMINER